



TT1221A / TT1222

Single Channel SD 4:2:0 Receivers

The vast array of digital TV channels available today means that there is high demand for reliable and high quality professional receivers for monitoring applications. This extensive range of channels also feeds the demand for turn-around systems where, for example, a satellite channel will be re-distributed over a cable network. Such applications demand a very flexible product capable of handling many differing CA standards and network architectures. It is these types of applications in which the TANDBERG Television TT1221A/TT1222 excels.

The TT1221A/TT1222 is designed to decode to the highest quality MPEG-2 SD 4:2:0 video. The TT1221A/TT1222 handles all major video formats and resolutions including Russian SECAM. In addition, extensive VBI handling allows the receiver to support a variety of system architectures.

PRODUCT OVERVIEW

Cost-Effective Solutions

The TT1221A/TT1222 has been designed for high volume professional applications. It is therefore capable of offering an unrivalled combination of price, performance and level of features.

Tailored to the Needs of Regional Variations

The TT1221A product has been designed with the needs of the Americas market in mind, offering interfaces that meet the system requirements for that region. Similarly the TT1222 unit is tailored to the needs of European and Asian markets ensuring the unit can be interfaced into the rest of the network in the most cost efficient manner.

Secure Transmission

Security of content is all-important - something that is taken seriously by the TT1221A and TT1222. The TT1221A/TT1222 supports all major encryption systems including BISS 1 & E, Common Interface and TANDBERG Director V5 CA.

Low Cost of Operation

The TT1221A/TT1222 can be integrated into a TANDBERG Television Director V5 control system enabling large populations of receivers to be remotely controlled over-air from a central location - simplifying the system control structure and reducing the need for costly on-site local operators.

BASE UNIT FEATURES

TT1221A – American Cable Receiver (TT1221A/CIBAS)

The TT1221A is designed specifically for the American cable market.

- Broadcast quality NTSC video output.
- Dual audio with screw terminal connectors.
- Integrated TANDBERG Director CA and over-air control system.

TT1222 – Common Interface Receiver (TT1222/CIBAS)

The TT1222's flexibility allows it to fit into most systems.

- Common Interface for descrambling of most common CA systems.
- Dual audio with XLR break-out cable.

TT1222 – Russian SECAM Receiver (TT1222/RSBAS)

The TT1222/RSBAS featuring the same functions as the Common Interface receiver with the addition of broadcast quality Russian SECAM output.

Other standard features for both units include:

- MPEG-2 4:2:0 decoding for all common resolutions.
- Automatic selecting of PAL/NTSC video formats.
- Support for SECAM and Russian SECAM - with TT1222/RSBAS.
- Extensive VBI handling.
- Support for Aspect Ratio Conversion.
- Subtitling capability that can be 'burnt' into the video.
- Musicam (MPEG Layer II) audio outputs.
- Dolby 5.1 down-mix to stereo.
- Easy-to-use front panel display.
- Web browser interface for remote control and monitoring.
- Integrated with TANDBERG Television's nCompass Control and Monitoring.

OPTIONS

Input Options

Transport Stream Input Options

The TT1221A and TT1222 have a flexible design enabling the unit to be fitted with either an ASI input or a high performance QPSK satellite input.

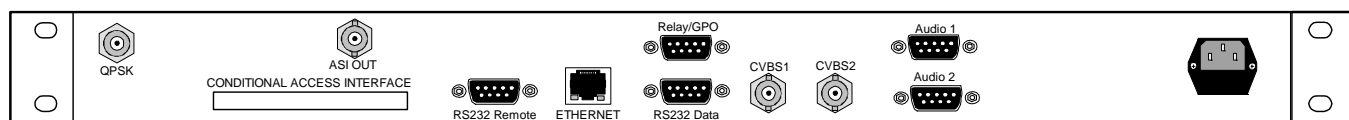
QPSK Input	(TT1222/HWO/QPSK)
ASI Input	(TT1222/HWO/ASI/IN)

Additional Options

The TT1221A and TT1222 can be enabled with a range of output formats. These includes ASI and SDI output for further retransmission and support for Russian SECAM.

Single ASI Output	(TT1222/HWO/ASI/OUT)
Dual ASI/SDI Output	(TT1222/HWO/ASI/SDI)
MPEG over IP Transport Stream Output - check availability	(TT1222/HWO/IP/OUT)
High Speed Data over Ethernet (MPE) - check availability	(TT1222/SWO/IP/DATA)
Decoding of Dolby Digital [®] AC-3 audio	(TT1222/SWO/AC-3)
TANDBERG Director V5	(TT1222/SWO/DirV5)

SAMPLE CONFIGURATION



SPECIFICATIONS

Inputs	Features	Control
DVB QPSK Input Connector: F-type (F) 75 ohm Frequency range: 950-2150 MHz Symbol rates: 1-45 Msymbols/s LNC power: 13V, 18V or off 22 KHz tone: On/off Spectral inversion: Normal/inverted	Automatic Selection of PAL/SECAM/NTSC TS Handling Complete DVB PSI/SI processing PSI/SI disable for non-DVB streams ATSC service selection Auto selection of language for audio, subtitling and teletext	Front panel keypad and LCD nCompass Control & Monitoring In Band remote control with TANDBERG Director V5 (option) Web page control Over-Air software download with TANDBERG Director V5 (option)
DVB ASI Input Connector: BNC (F) Impedance: 75 ohm Sustained TS rate: 60 Mbit/s	Flexible VBI Handling DVB Text (WST), reinserted in PAL and SECAM outputs (VBI) Inverted teletext insertion Wide Screen Signaling (WSS) and Video Programming System (VPS) Test Signal (VITS) generation Closed captions GCR Sin (x)/x	Physical and Power Dimensions (W x D x H) 435 x 275 x 44mm (19" x 10.75" x 1RU) Input Voltage 110/240VAC Power Consumption 20W (depending on options fitted) Cooling Integrated fan, units may be stacked on top of each other
Outputs Analog Video Output 2 x BNC (F) 75 Ohm PAL NTSC SECAM Russian SECAM (Option)	On-Screen Processing EBU-teletext subtitling DVB subtitling	Environmental Conditions Operating Temperature °C to +50°C (32°F to 122°F) without DVB CI module Storage Temperature -20°C to +60°C (-4°F to 140°F) Relative Humidity 5 to 95%
Digital Video Output (Optional) 1 x BNC (F) 75 Ohm 2 x BNC (F) 75 Ohm (Option) EDH and VBI support 2 embedded uncompressed audio pairs	Flexible CA Handling DVB Common Interface: Conax Irdeto Nagravision CryptoWorks MediaGuard BetaCrypt TANDBERG Director (option) BISS (Mode-1 & E)	Compliance CE compliant
Analog Audio Output 9-way D-type, balanced (M) Two balanced audio pairs - MPEG Layer II or Dolby® AC-3 downmixing	Format Conversion Letterbox handling PAN/SCAN 14:9 Combination (PAL/SECAM only)	
Digital Audio Output 9-way D-type, unbalanced (M) Dolby Digital® AC-3 (option) Serial Digital Audio (S/PDIF)		
Data Output 9-way D-type, (M) Asynchronous RS232		
DVB ASI Output (Optional) 1 x BNC (F) 75 Ohm 2 x BNC (F) 75 Ohm (option) Sustained transport stream data rate: 60 Mbit/s Enable/disable descrambling of one selected service		

TANDBERG television

Europe, Middle East and Africa
Americas
Asia
Australasia

+44 (0) 2380 484666
+1 678 812 6300
+852 2899 7000
+61 2 8923 0400
www.tandbergtv.com

TANDBERG Television maintains a policy of product improvement and reserves the right to modify the specifications without prior notice.
©TANDBERG Television Ltd. 2006. All rights reserved.